

REMARKS

Claims 1-24 are currently pending in the present application.

The Examiner is thanked for the courtesies extended during the March 3, 2005 Interview. The following remarks are consistent with the discussions in Interview.

Claims 2-6, 8-12 and 17-21 stand allowable if amended into independent form. The Applicant wishes to express his appreciation for the Examiner's indication that these claims contain patentable subject matter. For the reasons discussed in the Interview and set forth further below, the Applicant believes these claims depend from allowable parent claims. Accordingly, the Applicant respectfully declines the invitation to place claims 2-6, 8-12 and 17-21 into independent form at this time.

Claims 1, 7, 13-16 and 22-24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Publication No. US 2002/0100269 A1 ("Stahlecker '269") in view of U.S. Patent No. 4,787,198 to Stahlecker ("Stahlecker '198").

1. The Claims Are Patentable Over the Cited References.

The Applicant respectfully traverses the pending § 103(a) rejections on the grounds that the Stahlecker references fail to teach or suggest all of the features of the present invention recited in the pending claims.

The Present Invention: As noted in the Interview, the present invention is directed to a process and apparatus for recovering from a yarn end break in a spinning arrangement. As shown in the embodiment in present Fig. 1, when a break in the yarn being formed on collecting surface 5 is detected at detector 35,

the feeding of combed fibers onto the collecting surface 5 is halted by stopping feed roller 14. Application ¶¶ [0028]-[0029]. Associated with the halting of the fiber feed, a vacuum is applied by suction nozzle 36 to remove the thick fiber beard 7 remaining on the collecting surface after the yard break, and thereby rapidly prepare the collecting surface for restart of the spinning operation. *Id.* ¶¶ [0030]-[0032]. The suction nozzle 36 is located near the end of the yarn formation area (*i.e.*, immediately adjacent to nipping roller 10), in part to provide complete fiber removal in order to avoid fiber blockages when the spinning process is restarted. In addition, rather than blowing the fibers off collecting surface 5, suction of the fiber beard is used in order to avoid the highly undesirable blowing of large volumes of fibers throughout the spinning facility. Once the collecting surface is clear of the residual fiber beard, the spinning process may be restarted, with or without the assistance of the suction applied through nozzle 36. *Id.* ¶¶ [0034]-[0045].

Thus, the present invention provides a method and apparatus for immediate recovery from a yard end break with little or no operator invention required.

The Cited References: The Applicants respectfully submit that the present invention is neither taught or suggested by the combination of the cited Stahlecker references.

Stahlecker '269 is cited as teaching the use of a suction nozzle, but failing to specifically mention where the nozzle would be located. Stahlecker '198 is cited as teaching that it is well known to clean a fiber collecting surface at a

point near the yarn formation point. October 14, 2004 Office Action at 2-3.

As discussed at the Interview, Stahlecker '269 teaches only the cleaning of the *non-fiber-bearing* portions of a continuous fiber collecting surface, using air jets 42 (Fig. 4) and 53 (Fig. 6) to blow the typically very small bits of residual fibers, dust, etc. remaining *after* the fiber beard has been removed from the collecting surface well upstream of the jets. Stahlecker '269 at ¶¶ [0047], [0051], Figs. 4, 6. This teaching is consistent with the knowledge in the art that use of airjet nozzles for belt cleaning should be limited to cleaning of de minimis residue from the belt, in order to avoid spreading large volumes of fibers into the production facility atmosphere.

The sole mention of use of suction for belt residue cleaning is a passing reference in the summary of the invention, immediately after the description of the use of a cleaning roller or airjet nozzle, to the use of a suction nozzle being "also possible." *Id.* at ¶ [0010]. Importantly, there is no ambiguity in Stahlecker '269 as to where this cleaning function is to be performed (whether by roller, airjet or suction: on the surface of the sieve belt facing *away* from the surface on which the fiber beard is laid onto the belt and then gathered into a yarn. *Id.*

Thus, there is no teaching or suggestion in Stahlecker '269 for the use of suction to clean a sieve belt on the yarn-forming side of the belt, let alone its use to lift an entire fiber beard off the belt.

For its part, the Stahlecker '198 reference does not cure the deficiencies of Stahlecker '269. Rather than teaching the cleaning of a fiber collecting surface before the yarn nipping line, Stahlecker '198 discloses the application of suction

downstream of the main fiber-carrying portion of the belt. Stahlecker '198 at 4:37-5:22, Figs. 2, 3 (*i.e.*, not on fiber-bearing duct 14, before the yarn-forming rollers 15, 16).

Moreover, the suction applied in Stahlecker '198 is not for *any* belt cleaning purpose – suction is applied to the interior of roller 15 *for the purpose of holding the fibers in the yarn-forming gap between rollers 15 and 16, and to help move the fibers from the belt into these yarn-forming rollers* – exactly the opposite of the present invention's use of a suction nozzle to keep the fiber beard *out* of the yarn-forming portion of the apparatus. *Id.* at 5:18-22 ("This [suction] is used for holding the forming yarn 5 in the wedged-shaped gap 16 [sic, 17]. The [suction] also has the purpose of promoting the fiber transport into the fiber-feeding duct 14.").

Stahlecker '198 therefore does not suggest modification of Stahlecker '269 to either clean a sieve belt or to move a suction nozzle to the yarn-forming side of the spinning apparatus to prevent a fiber beard from entering a nipping roller.

In view of the foregoing, the Applicant respectfully submits that no combination of the cited Stahlecker references would result in the present invention's method and apparatus for clearing a heavy fiber beard from a production side of a yarn-forming belt in order to recover from a yarn end break. Accordingly, reconsideration and withdrawal of the pending § 103(a) rejection of claims 1, 7, 13-16 and 22-24 is respectfully requested..

CONCLUSION

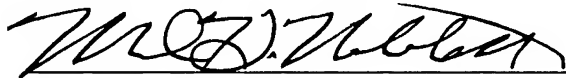
In view of the foregoing amendments, the Applicants respectfully submit that claims 1-24 are in allowable form. Early and favorable consideration and issuance of a Notice of Allowance for these claims is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #010971/53184US).

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